

potential, may also be required for non-border areas. This coordination requirement particularly may affect the implementation of satellite DARS operations in the 25 MHz of WCS spectrum being allocated to DARS on a co-primary basis with other services.³³⁶ Potential satellite DARS applicants should consult the February 16, 1996 letter from the FCC Satellite Engineering Branch to representatives of the current four satellite DARS applicants and responses thereto that address coordination in these bands for satellite DARS.³³⁷ Use of the WCS spectrum for DARS services will be governed by the rules and regulations that will apply to the exclusive DARS spectrum between 2320-2345 MHz. These rules are expected to be adopted shortly in a Report and Order to be issued in IB Docket No. 95-91.³³⁸

9. RF Safety

151. *Background.* With regard to RF safety requirements, we proposed in the *NPRM* to treat WCS services and devices, operating within the 2305-2320 MHz and 2345-2360 MHz bands, in a comparable manner to other services and devices that have similar operating characteristics. We noted that Sections 1.1307(b), 2.1091 and 2.1093 of our Rules list the services and devices for which an environmental evaluation must routinely be performed.³³⁹ Accordingly, we proposed that an environmental evaluation for RF exposure would be required for the following WCS operations: (1) transmitting terrestrial stations in the satellite DARS service, e.g., "gap fillers"; (2) fixed operations, including base stations and radiolocation, that have an effective radiated power ("ERP") greater than 2000 watts; and (3) mobile and portable devices.³⁴⁰ We invited comment on this proposal and requested suggestions for alternatives that would ensure public health with respect to exposure to RF radiation.

³³⁶ See n. 11, *supra*.

³³⁷ These documents are filed in IB Docket No. 95-91, GN Docket 90-357, RM No. 8610, PP-24, PP-86, and PP-87.

³³⁸ See *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, IB Docket No. 95-91, GEN Docket No. 90-357, *Notice of Proposed Rule Making*, 11 FCC Red 1 (1995).

³³⁹ See 47 C.F.R. §§ 1.1301, 1.1307(b), 2.1091, and 2.1093. The RF radiation exposure limits are set forth in 47 C.F.R. §§ 1.1310, 2.1091, and 2.1093, as applicable.

³⁴⁰ For the purposes of our RF safety rules, mobile devices are defined as transmitters designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between radiating antennas and the body of the user or nearby persons. Portable devices defined as transmitters designed to be used within 20 centimeters of the body of the user. See 47 C.F.R. §§ 2.1091(b) and 2.1093(b).

152. *Comments.* Omnipoint believes that operations at the "proposed" maximum effective radiated power limit of 2000 watts at 2.3 GHz would be a threat to human health.³⁴¹ Omnipoint contends that because 2.3 GHz also is roughly the same frequency band used in conventional microwave ovens to heat food, the proposed 2,000 watt limit could pose risk of injury. Omnipoint recommends that the power limit for 2.3 GHz transmitters used for terrestrially delivered services be limited to no more than a few watts ERP. No reply commenters discussed RF safety issues.

153. *Decision.* In the *NPRM*, we proposed not to limit the output power of any WCS transmitter, but would require that WCS transmitters comply with our RF exposure limits. We recognize Omnipoint's concerns; however, we note that the Commission recently adopted new, more stringent exposure limits in ET Docket No. 93-62 which apply to all frequencies between 300 kHz and 100 GHz.³⁴² When adopting these new exposure limits, the Commission considered recommendations from, *inter alia*, the Environmental Protection Agency, the Food and Drug Administration, and other federal health and safety agencies. Although Omnipoint has raised questions about the power threshold below which WCS facilities would be excluded from routinely determining compliance with the new exposure limits, we have not received information in this proceeding indicating that the new exposure limits would not adequately protect public health at WCS operating frequencies.³⁴³ Because all fixed, mobile, and portable transmitters are required to comply with our RF safety rules, as more specifically discussed below, we believe that this decision will satisfactorily protect public health and should allay Omnipoint's concerns.

154. Specific to this proceeding, we are requiring applicants desiring to use the following types of transmitters to perform routine environmental evaluations: (1) transmitting terrestrial stations in the satellite DARS service and fixed operations, including base stations and radiolocation transmitters, when the ERP is greater than 1000 watts;³⁴⁴ (2) all portable devices; and (3) mobile devices, if the EIRP of the station, in its normal configuration, will be

³⁴¹ Omnipoint Comments at 11.

³⁴² See *Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, ET Docket No. 93-62, *Report and Order*, 11 FCC Rcd 15123 (1996). See also *First Memorandum Opinion and Order*, ET Docket No. 93-62, 11 FCC Rcd 17512 (1997).

³⁴³ We note that several petitions for reconsideration have been filed in response to the *Report and Order* in ET Docket 93-62. Those petitions, including petitions questioning the RF exposure limits, will be addressed in that proceeding.

³⁴⁴ We note that 1000 watts ERP equates to 1640 watts EIRP.

1.5 watts or greater.³⁴⁵ We have chosen the 1000 W ERP threshold, instead of the proposed 2000 watts, because of the flexibility in this service with respect to use, power, location, and other factors, and we believe that this power limit is appropriate for most exposure situations. This approach is consistent with our existing rules for transmitters and devices of comparable use and similar operating frequencies. We will be providing guidance on acceptable methods of evaluating compliance with the Commission's exposure limits in OET Bulletin 65.³⁴⁶

10. WCS Interference to MDS/ITFS

155. Background. The Multipoint Distribution Service ("MDS") and the Instructional Television Fixed Service ("ITFS") operate in the 2150-2162 and 2500-2690 MHz bands.³⁴⁷ After the comment period for this proceeding had closed, several parties filed *ex parte* statements expressing their concern that WCS transmissions would interfere with MDS/ITFS receiving installations. Specifically, BellSouth states that the receiver/downconverter ("downconverter") located at each MDS/ITFS customer's home is an inexpensive broadband device that receives all frequencies between 2.1 GHz and 2.7 GHz.³⁴⁸ Thus, BellSouth states that a MDS/ITFS downconverter located sufficiently close to a WCS transmitter would directly receive WCS signals that would prevent clear reception of MDS/ITFS signals. Specifically, BellSouth calculates that a WCS transmitter that radiates more than 80 watts EIRP and that is located within 300 feet (91.44 meters) of a MDS/ITFS downconverter would overload the downconverter and thus prevent the reception of MDS/ITFS programming and information services. In order to counteract this problem, BellSouth requests that we limit WCS radiated power to 20 watts EIRP, unless the WCS licensee obtains an interference consent agreement from the existing MDS and ITFS licensees. BellSouth states that its

³⁴⁵ We note that the Commission is currently considering petitions for reconsideration in ET Docket 93-62 that propose revising the power exclusion for routine evaluation of mobile devices above 1.5 GHz from 1.5 watts to 3 watts. We expect to act on these petitions in the near future.

³⁴⁶ This document is expected to be released shortly after release of the ET Docket 93-62 *Second Memorandum Opinion and Order*. Note that OET Bulletin 65 will replace OST Bulletin No. 65 and will reflect our new exposure limits.

³⁴⁷ See 47 C.F.R. Part 21, Subpart K and Part 74, Subpart I. MDS in the 2596-2644 MHz band is sometimes referred to as the Multichannel Multipoint Distribution Service ("MMDS").

³⁴⁸ See BellSouth *Ex Parte* Statement, filed January 30, 1997. An MDS/ITFS downconverter (or block frequency converter) is a device which transfers the information content of incoming signals on microwave frequencies to frequencies that can be received by a television receiver. It is generally located near the rooftop receiving antenna or is physically integrated into the receiving antenna. See Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations, *Declaratory Ruling and Order*, FCC 96-304 (released July 10, 1996) (petitions for clarification and partial reconsideration pending).

proposed limit on WCS power would limit the maximum input to MDS/ITFS receivers to 12 decibels below one milliwatt (or -12 dBm), thus providing protection against receiver overload.

156. The Wireless Cable Association asserts that there currently are one million analog MDS/ITFS installations and that interference from WCS operations could cost \$125,000,000 or more to cure.³⁴⁹ The National ITFS Association notes that the Commission has a long standing policy of protecting existing operations from interference caused by newly authorized services and requests that we address this issue in a manner that would allow existing ITFS licensees to use the frequencies licensed to them as intended by the Commission.³⁵⁰

157. *Decision.* At this time we will not impose any technical restrictions on WCS licensees aimed at protecting the MDS/ITFS services. We understand the concerns expressed by the MDS/ITFS licensees, and we appreciate the value of the educational, entertainment and other programming provided by these services, including competition in the MVPD market. As we have repeatedly stated, it is our desire that these services continue to flourish. However, based on the record before us, we are not persuaded that the operation of WCS facilities would irreparably harm the MDS and ITFS services. Without a clear sense of what particular services WCS licensees will provide, and how soon these will be operational, the interference impact of WCS operations on MDS/ITFS is unclear. Therefore we believe it would be premature at this time to consider specific interference protection for MDS/ITFS. We also observe that the record on this issue is incomplete in that concerns of the MDS/ITFS community were first raised in late filed *ex parte* comments and thus no potential WCS applicants have had an opportunity to respond to those comments. We also note that traditional, analog MDS/ITFS downconverters have employed an inexpensive design that has minimal frequency selectivity. Thus, even though MDS/ITFS is licensed in the 2150-2162 MHz and 2500-2690 MHz bands only, their downconverters receive all signals throughout the entire 2.1-2.7 GHz band. We are aware that the MDS/ITFS industry is converting to newer, more robustly designed downconverters that have vastly improved frequency selectivity and would not receive WCS signals. Also, the digital downconverters to which the MDS/ITFS industry is expected to convert over the next several years are expected to be better designed and not subject to overloading from WCS signals.³⁵¹ We applaud these developments and do

³⁴⁹ See Wireless Cable Association *Ex Parte* Statement, filed January 31, 1997.

³⁵⁰ See National ITFS Association *Ex Parte* Presentation, filed February 6, 1997.

³⁵¹ See generally BellSouth News Release, "BellSouth Acquires Wireless Cable of Atlanta," released February 12, 1997 (BellSouth expects to "begin providing digital cable TV service to households in the Atlanta area in late 1997").

not wish to impede them. The public is served through the efficient use of available spectrum which, in turn, is facilitated by the use of receiving technology designed to provide protection from other spectrum users in the market. Thus, to the extent that we may in the future, based on actual WCS operations, find it necessary to adopt an interference rule for WCS, we would protect only those MDS/ITFS downconverters installed within a year from the adoption date of this Report and Order. After that time, we would expect that only more spectrally efficient downconverters would be installed by MDS/ITFS licensees. In sum, we conclude that it would be improvident to adopt a requirement for WCS licensees to protect MDS/ITFS operations unless and until we have a more precise understanding about the nature and extent of problems that may actually arise.

11. Field Strength Between Service Areas

158. *Background.* In the *NPRM*, we proposed to permit WCS licensees to partition their service areas. Further, if partitioning is employed, we proposed to require that WCS systems be designed not to exceed a signal level (*i.e.*, a predicted or measured median field strength) of 47 dB μ V/m at the licensee's service area boundary, unless the affected adjacent service area licensees agree to different signal level.³⁵² No comments were filed on this issue.

159. *Decision.* In order for licensees to share spectrum along a common border, each licensee must decrease its signal level at the border so that, while it can provide acceptable communications within its licensed service area, its signal level across the border is sufficiently reduced to avoid causing interference to the neighboring system. In broadband PCS, we adopted a predicted or measured median field strength of 47 dB μ V/m at any location on the border of the PCS service area unless the parties agree to a higher field strength. In drafting the proposed rules in the *NPRM*, we had to assume one of the service area options that were proposed in text. We assumed a nationwide license and thus did not specifically address the issue of median field strength between initial service areas. Nevertheless, we did specifically propose requiring a maximum median field strength of 47 dB μ V/m between those service areas which would be formed through geographic partitioning. We shall adopt this same 47 dB μ V/m maximum median field strength requirement between all service areas, unless the parties agree to a different field strength.

³⁵² See *NPRM*, Appendix at § 27.55, 61 FR at 9064.

12. Additional Technical Issues

160. In addition, Sun Microsystems requests that a minimum data rate of 5 bits per hertz be required for the WCS bands.³⁵³ Sun Microsystems argues that setting the minimum data rate at this high level would stimulate new technologies. Sun Microsystems proposes that analog transmission on the WCS spectrum be prohibited. Sun Microsystems states that each service offering should be tiered in order to allow the largest possible number of people to afford its benefits.³⁵⁴ Sun Microsystems requests that high gain directional antenna systems (with beamwidths no greater than 2° to 3°) be required for high power use and that any omnidirectional antenna be required to use low power and 18 to 25 dB gain antennas. Finally, Sun Microsystems suggests that orthogonal coding and modulation schemes be permitted in order to allow more than one licensee to use the same spectrum simultaneously. No party commented on Sun Microsystems' proposals.

161. *Decision.* We believe that the licensees will have a strong incentive to put the spectrum to its best use. There is nothing in the record of this proceeding that suggests that prohibiting certain technologies or requiring specific technologies is appropriate for the WCS. Accordingly, we decline to adopt the technical regulations proposed by Sun Microsystems.

E. Auction Procedures

162. In the *NPRM*, we proposed an auction design and pre-auction procedures for the WCS service in accordance with the Appropriations Act and the expedited schedule which it imposes. Specifically, we proposed to award the WCS licenses through competitive bidding and by means of a simultaneous multiple round electronic auction. We based this proposal on the need to auction the WCS licenses quickly and to promote the efficient use of the spectrum. As we noted, the Appropriations Act requires the Commission to commence the WCS auction no later than April 15, 1997 and to conduct the auction in a manner that ensures that all proceeds are deposited into the United States Treasury no later than September 30, 1997.

³⁵³ Sun Microsystems Comments at 1.

³⁵⁴ For example, Sun Microsystems states that a data service provider must be required to offer T1 (1.544 Mbps), 256 kbps, 128 kbps and 56 kbps services, with the lower speed services to be offered at a proportionally lower cost.

1. Competitive Bidding Design

163. *Background.* In the *NPRM*, we proposed to auction licenses to offer WCS service in conformity with the general competitive bidding rules in Part 1, Subpart Q of the Commission's Rules and substantially consistent with the auctions that have been employed in other wireless services.³⁵⁵ In addition, we proposed certain modifications, addressed *infra*, to help speed the auction process given the deadlines imposed by the Appropriations Act.

164. *Comments.* Few commenters addressed our proposed competitive bidding design. Similarly, commenters expressed little opposition to our proposal to use a single, simultaneous multiple round auction to award the WCS licenses. One commenter simply expresses support for a simultaneous multiple round auction.³⁵⁶ Another endorses our proposal to use the competitive bidding design used in the PCS auctions, because it is in place, tested, validated, known, and understood.³⁵⁷

165. *Decision.* We adopt our proposal to employ a single simultaneous multiple round auction design for the WCS auction similar to that used in the PCS auctions. As we explained in the *NPRM*, we believe that multiple round bidding will provide more information to bidders about the values of the licenses during the auction than single round bidding. With better information, bidders will have less incentive to shade their bids downward in order to avoid the "winner's curse", that is the tendency for the winner to be the bidder who most overestimates the value of the item being auctioned.³⁵⁸ We also believe that multiple round bidding is likely to be fairer than single round bidding as every bidder will have the opportunity to win a license if it is willing to pay the most for it. Finally, as we stated in the *NPRM*, a single simultaneous auction will facilitate any aggregation strategies that bidders may have and will provide the most information to bidders about license values at a time that they can best put that information to use.

166. In addition, we adopt our proposal to require bidding for WCS licenses by electronic means only. As we indicated in the *NPRM*, we base this decision on our belief that while oral outcry auctions can be simple and rapid, it is not possible to auction multiple licenses simultaneously in an oral auction. We also note that because of the potentially large

³⁵⁵ 47 C.F.R. Part 1, Subpart Q.

³⁵⁶ ADC Comments at 3.

³⁵⁷ Pacific Comments at 4.

³⁵⁸ See *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, FCC 94-61, *Second Report and Order*, 9 FCC Rcd at 2348, 2362 (1994) ("*Second Report and Order*").

value of the WCS licenses, an electronic multiple round auction will be preferable because it will permit bidders time between rounds to confer with principals and reassess their valuation models and bidding strategies. We also adopt our proposal to require that bidders submit their bids electronically, rather than by telephone. Given the time constraints imposed by the Appropriations Act, as well as the recent improvements in our electronic bidding software, we believe that telephonic bidding should be permitted only under exceptional circumstances, to be determined by the Wireless Telecommunications Bureau. Finally, we delegate to the Wireless Telecommunications Bureau the discretion to determine whether bidding for the WCS auction will be remote or on-site.

2. Bidding Procedures

167. *Background.* In the *NPRM*, we tentatively concluded that the WCS auction should follow the general competitive bidding procedures of Part 1, Subpart Q of the Commission's Rules. In addition, we proposed to adopt specific provisions regarding certain bidding-related issues. Finally, we asked interested parties to suggest the appropriate level of a minimum opening bid for the WCS license or licenses.

168. *Comments.* Commenters that support spectrum block and service area sizes that would result in large numbers of licenses generally recognize the difficulties involved in completing the WCS auction within the statutorily-prescribed time period, but suggest auction procedures alternative to a minimum opening bid to speed the auction. For example, DigiVox proposes that the Commission speed the auction process by prescribing minimum bids and higher bidding increments in the early stages of the auction and by conducting multiple rounds of bidding early in the auction.³⁵⁹ BellSouth, a proponent of BTA service areas, believes that the Commission should employ "a combination of activity rules, stopping rules, and multiple bidding rounds per day, similar to what was done for the D, E, and F Block PCS auctions."³⁶⁰ Another proponent of BTA service areas believes that the Commission can complete the WCS auction within the time constraints imposed by the Appropriations Act by adopting three rule revisions that it believes would encourage bidders to bid early in the auction on the licenses in which they are interested: (1) a non-simultaneous "stopping" rule under which the Commission would stop taking bids on a particular license if no bids have been submitted for that market after a specified number of rounds; (2) submission of market- and frequency-specific upfront payments rather than a blanket upfront payment that allows a bidder to remain eligible in each round for any combination of markets covered by the entire payment; and (3) increasing the number of bidding rounds per day, taking advantage of the

³⁵⁹ DigiVox Comments at 5 and exhibit 5.

³⁶⁰ BellSouth Comments at 10-11.

experience that many participants will have acquired in earlier auctions.³⁶¹ Another commenter also suggests that the Commission can conduct multiple rounds per day.³⁶²

169. ALLTEL supports the exclusive use of electronic bidding and filing procedures if MTA service areas are used, which it believes will facilitate the administration of an auction for 306 licenses (six 5 MHz blocks over 51 MTAs).³⁶³ AT&T, a proponent of 10 MHz blocks on an MTA basis, believes that an efficient auction can be conducted by: (1) conducting multiple auction rounds per day; (2) setting minimum opening bids high enough to deter speculative bidders; (3) raising the "activity rule" and reducing the number of waivers to the rule granted to each bidder; and (4) imposing short deadlines for petitions to deny, responses thereto, and payment of the balance of winning bids.³⁶⁴ We received no comments suggesting the amount of the minimum opening bid for the WCS auction.

170. *Decision.* We adopt the bidding procedures that we proposed in the *NPRM*. The WCS auction will be conducted using the general bidding procedures set forth in Part 1, Subpart Q of our Rules, with some minor modifications designed to speed the auction in order to comply with the time constraints imposed by the Appropriations Act. Specifically, we delegate to the Wireless Telecommunications Bureau the discretion to establish a minimum opening bid for the WCS licenses and to announce the minimum opening bid by public notice. As we stated in the *NPRM*, a minimum opening bid will cause bidders to start bidding at a substantial fraction of the final price of the license or licenses, thus ensuring that the auction proceeds quickly and increasing the likelihood that the public receives fair market value for the license or licenses. In keeping with our obligation under the Appropriations Act to ensure that the auction proceed rapidly, we also delegate to the Wireless Telecommunications Bureau the discretion to establish, raise and lower minimum bid increments in the course of the auction.³⁶⁵ Finally, we conclude that where a tie bid occurs, the high bidder will be determined by the order in which the bids were received by the Commission.

³⁶¹ ADC Comments at 21-22.

³⁶² BANM Comments at 8.

³⁶³ ALLTEL Comments at 4.

³⁶⁴ AT&T Comments at 5-6.

³⁶⁵ See 47 C.F.R. § 1.2104(d).

3. Procedural and Payment Issues

171. In the *NPRM*, we tentatively concluded that, with certain proposed modifications, Subpart Q of Part 1 of the Commission's Rules establishing procedural and payment rules for FCC auctions generally should apply to the WCS auction. Only one commenter addressed these issues. DigiVox contends that to effectively compete in the auctions, many parties (especially small businesses) will need 90 days from the release of the final rules before FCC Forms 175 are due in order to finalize their business plans. DigiVox proposes a schedule that includes commencing the auction on May 2, 1997.³⁶⁶ As we recognized in the *NPRM*, the Appropriations Act requires that the Commission "shall commence the competitive bidding" for WCS licenses no later than April 15, 1997. Although DigiVox urges an interpretation of this requirement that would allow applicants to submit their short-form applications on that date, we conclude that the statute clearly requires that "bidding" commence on April 15, 1997. We therefore will commence the WCS auction on April 15, 1997, and the auction will be conducted in substantial conformity with Subpart Q of Part 1 of the Commission's Rules. We also adopt general rules regarding application and licensing procedures.³⁶⁷

172. Pre-Auction Application Procedures. In the *NPRM*, we proposed that WCS applicants be required to file a short-form application (FCC Form 175) prior to the auction.³⁶⁸ In addition, we tentatively concluded that we should require electronic filing of all applications for this auction. We received no comments addressing this issue. We therefore will implement this proposal. Each bidder in the WCS auction must submit a short-form application (FCC Form 175) by means of electronic filing. As we stated in the *NPRM*, we believe that electronic filing of applications will serve the best interests of auction participants as well as ensure that the WCS auction will be completed within the time frame mandated under the Appropriations Act. We have developed user-friendly electronic filing software and Internet World Wide Web forms to give applicants the ability to easily and inexpensively file and review applications. In addition, we believe that in light of the legislative deadline of April 15, 1997 for commencement of this auction, requiring electronic filing will be helpful to applicants as well as the Commission. By shortening the time required for the Commission to process applications before the auction, electronic filing will increase the lead time available to applicants to finalize their business plans and arrange necessary financing before the short-form filing deadline.

³⁶⁶ DigiVox Comments at 6.

³⁶⁷ See Subpart E of new Part 27.

³⁶⁸ See 47 C.F.R. § 1.2105(a).

173. We also proposed in the *NPRM* that an applicant's electronic submission of FCC Form 175 include a certification that the applicant is not in default on any Commission licenses and that it is not delinquent on any extension of credit from any federal agency. No commenters addressed this issue. We therefore adopt this certification requirement for the WCS auction. As we stated in the *NPRM*, a certification regarding defaulted licenses and delinquent payments to federal agencies will enable us to better evaluate the financial qualifications of potential bidders, because it will allow us to determine whether any bidder may later be subject to a monetary judgment or collection procedures that may impair its financial ability to provide service. In the *Second Report and Order*, we decided that we should require sufficient information on the short-form application to make a determination that "the application is not in violation of Commission Rules and that applications not meeting those requirements may be dismissed prior to the competitive bidding."³⁶⁹ Part of this documentation necessarily includes certification that the bidder has the legal, technical, financial, and other qualifications to bid in the auction.

174. Upfront Payment Amount. The Part 1 Rules require the submission of an upfront payment as a prerequisite to participation in spectrum auctions.³⁷⁰ In the *NPRM*, we proposed to set the amount of the WCS upfront payment based on the general formula we adopted in the *Second Report and Order* of \$.02 per megahertz per population. In addition to seeking comment on this proposal, we asked commenters to suggest alternative methods of establishing an upfront payment, and in particular, how the Commission may estimate the value of the spectrum to be auctioned. We received no comments or alternative suggestions on this issue, so we will adopt our proposed upfront payment for the WCS auction. Given that a range of services may be provided on WCS spectrum, it is difficult to estimate the value of this spectrum. We believe, however, that a \$.02 per megahertz per population upfront payment will serve the twin purposes of upfront payments -- to deter insincere bidding and to provide the Commission with a source of funds to satisfy any bid withdrawal or default payments -- without being so high as to discourage participation in the WCS auction.

175. Procedure For Upfront Payment. We also proposed to require bidders to deposit their upfront payments in our lock-box bank by wire transfer only by a date to be announced by public notice. No commenters addressed this issue. We therefore adopt the requirement that bidders in the WCS auction deposit their upfront payment by wire transfer only. Although in the past we have permitted payment by cashier's check, we believe that requiring payment by wire transfer will benefit bidders by streamlining and expediting the administration of the auction. As we noted in the *NPRM*, our experience has shown that

³⁶⁹ *Second Report and Order*, 9 FCC Rcd at 2375

³⁷⁰ See 47 C.F.R. § 1.2106.

verification of payments remitted to us by cashier's check is time-consuming and cumbersome, and requires the allotment of extra processing time prior to the start of the auction. Permitting payment by cashier's check would require that upfront payments be made at an earlier point, which would decrease applicants' lead time to pursue business plans and arrange necessary financing before the start of the auction. In addition, given the large number of financial institutions offering wire transfer services, a requirement that bidders remit their upfront payments by wire transfer will result in minimal, if any, extra cost to auction applicants. Such a cost is far outweighed by the benefit of speeding the auction process through quicker verification of payments.

176. Down Payment and Full Payment. In the *NPRM*, we tentatively concluded that to help ensure that auction winners are able to pay the full amount of their bids, every winning bidder in the WCS auction would be required to tender a down payment sufficient to bring its total amount on deposit with the Commission up to 20 percent of its winning bid.³⁷¹ No commenters addressed this issue. We therefore conclude that a down payment equal to 20 percent of each high bidder's total winning bids will be due within 10 business days after the issuance of a public notice announcing the winning bidder for each WCS license.

177. We also proposed that a winning bidder that makes its down payment in a timely manner be required to file an FCC Form 600 long-form application and follow the long-form application procedures in Section 1.2107.³⁷² We proposed that after reviewing the winning bidder's long-form application, and after verifying receipt of the winning bidder's 20 percent down payment, the Commission would announce the application's acceptance for filing, thus triggering the filing window for petitions to deny. We also noted that given the abbreviated auction schedule contemplated by the Appropriations Act, a condensed schedule for the filing of petitions to deny would apply for the WCS auction. No commenters addressed this issue. We therefore adopt our proposals governing long-form application procedures. Winning bidders that have made the necessary down payment will be required to file a modified FCC Form 600 that has been updated to provide for our decision to permit flexibility in terms of permissible uses. Finally, the Appropriations Act provides that no application for a WCS authorization may be granted earlier than seven (7) days following public notice of the acceptance for filing of such an application, and that parties will have no less than five (5) days following such public notice to file a petition to deny.³⁷³ We will therefore afford parties five (5) days to file a response to any petition to deny. If, pursuant to Section 309(d) of the Communications Act, the Commission dismisses or denies any and all petitions to

³⁷¹ See 47 C.F.R. § 1.2107(b).

³⁷² See 47 C.F.R. § 1.2107.

³⁷³ See Appropriations Act, § 3001(c).

deny, the Commission will announce by public notice that it is prepared to award a license and the winning bidder will then have ten (10) business days to submit the balance of its winning bid. If the bidder does so, the license will be granted. If the bidder fails to submit the required down payment or the balance of the winning bid or the license is otherwise denied, we will assess a default payment as discussed *infra*.

178. Amendments and Modifications of Applications. In the *NPRM*, we stated that to encourage maximum bidder participation, applicants should be permitted to amend or modify their short-form applications as provided in Section 1.2105.³⁷⁴ We also noted that in the broadband PCS context, we modified our rules to permit ownership changes that result when consortium investors drop out of bidding consortia, even if control of the consortium changes due to this restructuring.³⁷⁵ No commenters addressed this issue. We therefore adopt the same exception to our rules prohibiting major amendments in the WCS auction.

179. Bid Withdrawal, Default and Disqualification. In the *NPRM*, we tentatively concluded that the withdrawal, default, and disqualification rules for the WCS auction would be based upon the procedures established in our general competitive bidding rules. With regard to bids which are submitted in error, we proposed to apply the guidelines which we recently fashioned to provide for relief from the bid withdrawal payment requirements under certain circumstances.³⁷⁶ No commenters addressed this issue. We therefore adopt these provisions governing bid withdrawal, default and disqualification for the WCS auction.

4. Anti-Collusion Rules

180. In the *NPRM*, we tentatively concluded that the anti-collusion rules which we adopted in the *Second Report and Order*, and which are codified at 47 C.F.R. § 1.2105, should apply to the WCS auction. We received no comments addressing the issue of collusion. We have therefore determined that our rules prohibiting collusive conduct will apply to the WCS auction.

³⁷⁴ 47 C.F.R. § 1.2105.

³⁷⁵ See *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, *Fourth Memorandum Opinion and Order*, 9 FCC Rcd 6858, 6868 (1994).

³⁷⁶ See *Atlanta Trunking Associates, Inc. and MAP Wireless L.L.C. Requests to Waive Bid Withdrawal Payment Provisions*, *Order*, 11 FCC Rcd 17189 (1996), *recon. pending*. See also *Georgia Independent PCS Corporation Request to Waive Bid Withdrawal Payment Provision*, *Order*, 11 FCC Rcd 13728 (1996), *app. rev. pending*.

5. Treatment of Designated Entities

181. *Background.* Section 309(j) of the Communications Act requires that in promulgating competitive bidding regulations, the Commission "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women [commonly referred to as 'designated entities'] are given the opportunity to participate in the provision of spectrum-based services."³⁷⁷ We stated in the *NPRM* that the allocation which we adopt contemplates that a WCS licensee will have broad flexibility in determining the range of services it will offer, and that licenses will be issued for broad geographic areas. In addition, we noted that our proposed partitioning and disaggregation rules for WCS licensing may provide designated entities with additional opportunities to participate in the provision of WCS service. We therefore asked commenters to address the extent to which potentially high capital costs for constructing WCS systems affect the advisability of adopting specific provisions for designated entities in the WCS auction.

182. We also recognized in the *NPRM* that the Appropriations Act requires that the Commission conduct the WCS auction in a manner that ensures that all proceeds of the bidding are deposited in the Treasury no later than September 30, 1997.³⁷⁸ Because of the expedited procedures imposed by the Appropriations Act, we noted that an entity acquiring a WCS authorization must be prepared to make payment on its full bid amount quickly. Thus, we tentatively concluded that installment payment plans would be an inappropriate mechanism for encouraging designated entity participation in the WCS auction. We sought comment on this tentative conclusion and, in particular, on how Congressional intent concerning designated entities can be effectuated in connection with competitive bidding for WCS licenses. With regard to specific types of designated entities, we sought comment on: (1) specific provisions to ensure the participation of minority and women-owned businesses, including discussion of how such provisions should be crafted to meet the relevant standards of judicial review (strict scrutiny for minorities and intermediate scrutiny for women);³⁷⁹ (2) the appropriate definition for small business to the extent commenters suggest special provisions for small businesses; and (3) whether any special provisions should be afforded to rural telcos.

³⁷⁷ 47 U.S.C. § 309(j)(4)(D). See also 47 U.S.C. §§ 309(j)(3)(B) and (j)(4)(A).

³⁷⁸ Appropriations Act, Section 3001(d).

³⁷⁹ See, for relevant standards of review, *Adarand Constructors v. Peña*, 115 S.Ct. 2097 (1995) ("*Adarand*") ("[Racial] classifications are constitutional only if they are narrowly tailored measures that further compelling governmental interests"), and *United States v. Virginia*, 116 S.Ct. 2264 (June 26, 1996) ("*VMF*") ("Parties who seek to defend gender-based governmental action must demonstrate an 'exceedingly persuasive justification' for that action").

183. *Comments.* Although we sought comment in the *NPRM* on how provisions to ensure the participation of minority- and women-owned businesses should be crafted to meet those relevant standards of judicial review, the comments that we received did not suggest the institution of provisions specifically benefiting businesses owned by minorities and women, and did not provide specific anecdotal or statistical evidence to develop a record supporting race-based or gender-based WCS auction rules. We did receive several comments suggesting that small business preferences frequently aid minority- and women-owned businesses, without raising substantial constitutional implications.³⁸⁰

184. Most commenters that discussed designated entities advocate bidding credits as a means of ensuring their effective participation.³⁸¹ As for the size of bidding credits to be offered, most commenters agree on a base of the levels offered for broadband PCS (15 percent for small businesses and 25 percent for very small businesses), supplemented by an adjustment in lieu of an installment payment program. Along those lines, for small businesses and very small businesses, CIRI suggests 20 percent and 35 percent, respectively;³⁸² RTG suggests 15 percent and 25 percent;³⁸³ and DigiVox suggests 25 percent and 40 percent.³⁸⁴ Omnipoint suggests a 25 percent bid discount plus an additional 20 percent off the net bid price "as a factor roughly equivalent to the time value of money under the broadband PCS F block installment plan."³⁸⁵ TTS suggests 15 percent for small businesses and rural telcos.³⁸⁶ DigiVox also suggests that, to foster competition and diversity of licensees as required by Section 309(j), an additional 5 percent bidding credit should be awarded to any small business bidder that does not hold a CMRS license in the MTA for which it is bidding.³⁸⁷

185. With respect to eligibility for bidding credits, most commenters suggest that we employ the definitions for small businesses and very small businesses applicable to broadband

³⁸⁰ CIRI Comments at 3; DigiVox Comments at 5, n. 4 ("Over 99 percent of women and minority owned businesses are small businesses").

³⁸¹ CIRI Comments at 10-11; DigiVox Comments at 8-9; TTS Comments at 4; RTG Comments at 10-11; Vanguard Comments at 9; AMTA Reply Comments at 5; NABOB Informal Comments at 6

³⁸² CIRI Comments at 11.

³⁸³ RTG Comments at 11.

³⁸⁴ DigiVox Comments at 8.

³⁸⁵ Omnipoint Comments at 11-12.

³⁸⁶ TTS Comments at 4.

³⁸⁷ DigiVox Comments at 9.

PCS.³⁸⁸ Vanguard, however, regards those definitions as overly restrictive because they exclude many businesses that, though not "small," are dwarfed by the large entities that won most broadband PCS block A and B licenses or that funded or had substantial equity interests in Block C winners. Vanguard suggests that the Commission expand its definition of small businesses to include entities with up to \$500 million in revenues and \$1.5 billion in assets.³⁸⁹

186. A number of other proposals are also advanced. AT&T and CTIA suggest that designated entities can best be accommodated through band plan determinations, and advocate a band plan that uses 10 MHz blocks (5 MHz pairs) divided geographically into MTAs, believing that this would encourage broad participation by designated entities, who might wish particularly to develop niche or technically innovative services.³⁹⁰ DSBC and SOSCO agree that the use of MTAs will allow small businesses that have identified niche markets to focus their bidding resources on those markets only and to introduce services in those markets relatively quickly.³⁹¹ Other commenters also argue in favor of MTAs, BTAs, and EAs, asserting that designated entities would be priced out of the bidding if nationwide or large regional licensing are used.³⁹² DSBC generally supports smaller bandwidth and service area allocations, believing them likely to improve the opportunities for designated entities to provide services in the proposed WCS band.³⁹³

187. To ensure that designated entities are able to participate in the provision of wireless services in the WCS band, however, DSBC also proposes that the Commission set aside a 5 MHz license in each MTA for designated entities or, alternatively, allow designated entities a 25 percent bidding credit. Some commenters propose that bidding credits be awarded to applicants accommodating and/or offering discounts to public safety users and schools.³⁹⁴ CIRI believes that set-asides of spectrum blocks and installment payments may no longer be effective small business provisions and, instead, recommends that the Commission

³⁸⁸ DigiVox Comments at 8; TTS Comments at 4; RTG Comments at 11; CIRI Comments at 9-10 (advocating the adoption of enumerated broadband PCS small business rules as a means of quickly developing a small business regime within the mandated time frame).

³⁸⁹ Vanguard Comments at 9.

³⁹⁰ See AT&T Comments at 2; CTIA Comments at 14.

³⁹¹ DSBC Comments at 8; SOSCO Reply Comments at 5.

³⁹² See, respectively, BANM Comments at 7; CTIA Comments at 14; TTS Comments at 2.

³⁹³ DSBC Comments at 10.

³⁹⁴ RTG Comments at 11; AWWA Comments at 5.

employ bidding credits along with control group equity requirements (as set forth in 47 C.F.R. § 24.709) and unjust enrichment restrictions (as set forth in 47 C.F.R. § 24.839(d)),³⁹⁵ and afford an exception from affiliation for concerns owned by Alaska Native Corporations and Indian Tribes (as set forth in 47 C.F.R. § 24.720(l)(11)(i)).³⁹⁶ DigiVox contends that the Commission should limit to 98 the total number of WCS licenses for which any party may take advantage of small business bidding credits and other designated entity benefits, believing this limit would prevent any one entity from accumulating too many licenses and would promote the diversity of licensees.³⁹⁷ Finally, three commenters believe that small businesses would benefit from liberal partitioning, disaggregation and franchising rules,³⁹⁸ and one of those suggests that the Commission grant to rural telcos of favorable partitioning and disaggregation rights as compared to other licensees.³⁹⁹

188. *Decision.*

A. Meeting the Constitutional Standards

189. Race- and gender-based classifications must meet exacting standards of judicial review. In *Adarand*, the Supreme Court held that all racial classifications, whether imposed at the federal, state or local government level, must be analyzed by a reviewing court under a strict scrutiny standard of review. This standard requires such classifications to be narrowly tailored to further a compelling governmental interest.⁴⁰⁰ In *VMI*, the Supreme Court reviewed a state program containing gender classification and held it was unconstitutional under an intermediate scrutiny standard of review. This standard requires that "[p]arties who seek to defend gender-based government action must demonstrate an 'exceedingly persuasive justification' for that action."⁴⁰¹ Under this test, the government must show "at least that the [challenged] classification serves 'important governmental objectives and that the discriminatory means employed' are 'substantially related to the achievement of those

³⁹⁵ CIRI Comments at 10.

³⁹⁶ *Id.* at 12-14 (noting the Commission's previous recognition that such an exception is unaffected by *Adarand*).

³⁹⁷ DigiVox Comments at 10.

³⁹⁸ Vanguard Comments at 4; AMTA Reply Comments at 4; RTG Comments at 11.

³⁹⁹ RTG Comments at 11 (this proposal is addressed more fully in Section III.D.3., *supra*).

⁴⁰⁰ *Adarand*, 115 S. Ct. at 2113.

⁴⁰¹ *VMI*, 116 S. Ct. at 2274 (citing *J.E.B. v. Alabama ex rel. T. B.*, 511 U.S. 127, 136-37 and n. 6 (1994) and *Mississippi Univ. for Women v. Hogan*, 458 U.S. 718, 724 (1982)).

objectives."⁴⁰² While the Supreme Court has not directly addressed constitutional challenges to federal gender-based programs since *Adarand* and *VMI*,⁴⁰³ our review of the relevant broad language in *VMI* indicates that the Court does not differentiate between federal and state official actions in its equal protection analysis.⁴⁰⁴ Similarly, the *Adarand* decision definitively eliminated any distinction between federal and state race-based programs in setting its strict scrutiny standard of judicial review.⁴⁰⁵ Therefore, we conclude that any gender-based preference maintained in the WCS auction rules would need to meet the *VMI* intermediate scrutiny standard of review.

190. We believe that the record in this proceeding is insufficient to support race- and gender-based provisions that would survive judicial scrutiny. Moreover, adopting race- and gender-based provisions unsupported by a substantial record would disserve the public interest because it might result in litigation that could further delay the conduct of the auction and the award of WCS licenses, and postpone the introduction of new competition to the marketplace.⁴⁰⁶ We therefore conclude that we should not adopt special auction provisions that are race- and gender-based.

191. While we decline to establish race- and gender-based provisions for the WCS auction rules, we will adopt provisions for small businesses, as suggested by several

⁴⁰² *Id.* at 2275 (quoting *Mississippi Univ. for Women v. Hogan*, 458 U.S. at 724 (quoting *Wengler v. Druggists Mutual Ins. Co.*, 446 U.S. 142, 150 (1980))).

⁴⁰³ *But see Lamprecht v. FCC*, 958 F.2d 382, 391, 393 n. 3 (D.C. Cir. 1992), a pre-*Adarand/VMI* decision in which Justice Thomas (a member of the D.C. Circuit panel to which the case was presented) invokes the "exceedingly persuasive justification" standard in striking down a federal gender-preference policy. As the dissent in *Lamprecht* confirmed, Justice Thomas applied "the more exacting scrutiny of Justice O'Connor's dissent [in *Metro*, 497 U.S. at 602-31]," *id.* at 404 (Mikva, C.J., dissenting), which formed the core of Justice O'Connor's majority opinion in *Adarand*.

⁴⁰⁴ "Since [*Reed v. Reed*, 404 U.S. 71 (1971)], the Court has repeatedly recognized that *neither federal nor state government* acts compatibly with the equal protection principle when a law or official policy denies . . . equal opportunity . . ." *VMI*, 116 S. Ct. at 2275 (emphasis added); "To summarize the Court's current directions for cases of *official* classification based on gender: . . . the reviewing court must determine whether the proffered justification is 'exceedingly persuasive.'" *Id.* (emphasis added). *See also Heckler v. Mathews*, 465 U.S. 728, 744-45 (1984) (reviewing a federal statute containing gender classification under the same standard the Court used to review the state statute in *Mississippi Univ. for Women v. Hogan*); *Califano v. Westcott*, 443 U.S. 76, 85 (1979) (same).

⁴⁰⁵ *Adarand*, 115 S. Ct. at 2113.

⁴⁰⁶ We observe that the D.C. Circuit Court of Appeals stayed the broadband PCS C block auction under an intermediate scrutiny standard. *Telephone Electronics Corp. v. FCC*, No. 95-1015 (D.C. Cir. Mar. 15, 1995) (order granting stay).

commenters. We note that nothing in the *Adarand* or *VMI* decisions calls our small business provisions into question. Moreover, by retaining small business preferences, we believe we will fulfill our mandate under Section 309(j) to provide increased opportunities for minority- and women-owned businesses,⁴⁰⁷ because many minority- and women-owned entities are small businesses who therefore will qualify for the same special provisions that would have applied to them under the previous rules.⁴⁰⁸

192. We also have initiated a comprehensive rule making proceeding to gather evidence regarding market barriers to entry faced by small businesses as well as minority- and women-owned firms.⁴⁰⁹ If a sufficient record is adduced that will support race- and gender-based provisions that will satisfy judicial scrutiny, we will consider race- and gender-based provisions for future auctions. Toward this end, we will continue to request bidder information on the WCS short-form filings as to minority- or women-owned status. In our analysis of the applicant pool and the auction results, we will monitor whether we have accomplished substantial participation by minorities and women through the broad provisions available to small businesses. This will also assist us in preparing our report to Congress on the success of designated entities in auctions.⁴¹⁰

B. Special Provisions for Designated Entities

i. Bidding Credits

193. We will adopt bidding credits for small businesses and will adopt a tiered bidding credit approach, as supported by several commenters. We agree with commenters that the availability of bidding credits is consistent with our obligations under Section 309(j) to "promote economic opportunity for a wide variety of applicants, including small businesses and businesses owned by minorities and women." We believe that a tiered approach, which enhances the discounting effect of bidding credits because not all entities receive the same benefit, will encourage smaller businesses to participate in the provision of WCS services. As for the level of the credits, we believe that bidding credits of 25 percent for small businesses

⁴⁰⁷ 47 U.S.C. § 309(j)(3).

⁴⁰⁸ See generally *1992 Survey of Minority-Owned Business Enterprises*, Agriculture and Financial Statistics Division, Bureau of the Census, U.S. Department of Commerce (December 11, 1995); *1992 Survey of Women-Owned Businesses*, Agriculture and Financial Statistics Division, Bureau of the Census, U.S. Department of Commerce (January 29, 1996).

⁴⁰⁹ See *Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses*, GN Docket No. 96-113, *Notice of Inquiry*, 11 FCC Rcd 6280 (1996). See also 47 U.S.C. § 257.

⁴¹⁰ See 47 U.S.C. § 309(j)(12)(D).

and 35 percent for very small businesses are appropriate. These levels reflect the thresholds used in the broadband PCS auctions with a reasonable adjustment for the unavailability of installment payment plans for WCS licensees. It is difficult to accurately calculate the net present value of an installment program (which value would depend on several variables including future commercial interest rates), and we therefore are adjusting the broadband PCS bidding credit levels upward by ten percentage points. We believe that this tiered bidding credit approach and 10 percent adjustment are reasonable and consistent with the comments. These credits are narrowly tailored to the varying abilities of businesses to access capital and also take into account that different small businesses will pursue different strategies.

ii. Definition of Small Business

194. Consistent with the suggestions of many of the commenters, we will generally employ the small business definitions and standards used in broadband PCS, which we believe have the advantages of ready availability and familiarity to many small businesses that might be interested in this spectrum. We will therefore define a "small business" as an entity with average gross revenues not exceeding \$40 million for each of the preceding three years, and a "very small business" as an entity with average gross revenues not exceeding \$15 million in each of the preceding three years. We decline to adopt the higher revenue standard suggested by Vanguard because we do not believe that Congress, in enacting Section 309(j), intended for firms with \$500 million in revenue to be regarded as "small". Furthermore, adopting Vanguard's suggested standard would create severe disparities between "small businesses" in terms of capitalization and access to financing.

195. In determining whether an entity qualifies as a small business at either threshold, we will consider the gross revenues of the applicant, its affiliates, and certain investors in the applicant. Specifically, we will attribute the gross revenues of all controlling principals in the applicant as well as the gross revenues of affiliates of the applicant.⁴¹¹ Consistent with broadband PCS rules, we apply two notable exceptions to these attribution rules. First, we determine that personal net worth is not included in the determination of eligibility for bidding as a small business.⁴¹² Second, we agree with CIRI that entities owned by Alaska Native Corporations and Indian Tribes are exempt from affiliation for purposes of determining eligibility of applicants for bidding credits, because of the general lack of availability of revenues from such entities for purposes of participation in WCS. This exception is

⁴¹¹ We note that with respect to spousal attribution, we will follow the policies adopted in the broadcasting context in *In re Clarification of Commission Policies Regarding Spousal Attribution*, 7 FCC Rcd 1920 (1992).

⁴¹² See, e.g., *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, *Fifth Memorandum Opinion and Order*, 10 FCC Rcd 403, 421 (¶ 30) (1994) ("*Competitive Bidding Fifth Memorandum Opinion and Order*").

consistent with treatment afforded such entities by the Small Business Administration's 8(a) program,⁴¹³ and as we have previously determined, we do not believe such a provision to be affected by *Adarand*.⁴¹⁴

196. We decline, however, to employ the specific control group equity requirements that we adopted for broadband PCS,⁴¹⁵ because the time frame for the conduct of the WCS auction is likely to be too short to allow for the creation of the type of complex financial relationships as arose in the broadband PCS context. Instead, we will simply define the term "control" to include both *de jure* and *de facto* control of the applicant.⁴¹⁶ However, we will still require that, in order for an applicant to qualify as a small business, qualifying small business principals must maintain "control" of the applicant. We also note that while we are not imposing specific equity requirements on the small business principals, the absence of significant equity could raise questions about whether the applicant qualifies as a *bona fide* small business.

iii. Unjust Enrichment

197. We agree with CIRI on the employment of an unjust enrichment restriction on the transfer of licenses acquired by small businesses, similar to that set forth in 47 C.F.R. § 24.839(d), which we believe necessary to ensure that meaningful small business participation is not thwarted by transfers of licenses to non-designated entities. To permit otherwise would severely impede the meaningful participation of designated entities because bidders could participate as small businesses with the intention not of providing service but only of profiting from the difference in the discounted auction price and the worth of the license on the resale market. To prevent unjust enrichment by small businesses transferring licenses acquired

⁴¹³ See 13 C.F.R. § 124.112(c)(2)(iii).

⁴¹⁴ See *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, *Sixth Report and Order*, 11 FCC Rcd 136, 155-56 (1995) ("Although Indian tribes are minorities under our C block auction rules, we conclude that their affiliation rule exception is different from the exception applicable only to minority investors in that it is premised on the unique legal status of Indian tribes as recognized in the 'Indian Commerce Clause' of the United States Constitution").

⁴¹⁵ See 47 C.F.R. § 24.709.

⁴¹⁶ Typically, *de jure* control is evidenced by ownership of 50.1 percent of an entity's voting stock. *De facto* control is determined on a case-by-case basis. An entity must demonstrate at least the following indicia of control to establish that it retains *de facto* control of the applicant: (1) the entity constitutes or appoints more than 50 percent of the board of directors or partnership management committee; (2) the entity has authority to appoint, promote, demote and fire senior executives that control the day-to-day activities of the licensees; and (3) the entity plays an integral role in all major management decisions. See *Competitive Bidding Fifth Memorandum Opinion and Order*, *supra*, at ¶ 80.

through the use of bidding credits, we impose a payment requirement on transfers of such licenses to entities that are not owned by small businesses. We believe it is appropriate to conform our unjust enrichment rules for WCS to the broadband PCS unjust enrichment rules as they relate to bidding credits. These rules provide that, during the initial license term, licensees utilizing bidding credits and seeking to assign or transfer control of a license to an entity that does not meet the eligibility criteria for bidding credits will be required to reimburse the government for the amount of the bidding credit before the transfer will be permitted.⁴¹⁷ Additionally, the rules which we now adopt provide that if, within the original term, a licensee applies to assign or transfer control of a license to an entity that is eligible for a lower bidding credit, the difference between the bidding credit obtained by the assigning party and the bidding credit for which the acquiring party would qualify must be paid to the United States Treasury as a condition of approval of the assignment or transfer.⁴¹⁸ These provisions also will apply to WCS licensees who partition or disaggregate their licenses.

198. If a licensee that utilizes bidding credits seeks to make any change in ownership structure that would render the licensee ineligible for bidding credits, or eligible only for a lower bidding credit, the licensee must first seek Commission approval and reimburse the government for the amount of the bidding credit, or the difference between its original bidding credit and the bidding credit for which it is eligible after the ownership change, plus interest based on the rate for ten year U.S. Treasury obligations applicable on the date the license is granted. Additionally, if an investor subsequently purchases an interest in the business and, as a result, the gross revenues of the business exceed the applicable financial caps, this unjust enrichment provision will apply.

199. The amount of this payment will be reduced over time as follows: (1) a transfer in the first five years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or, in the case of very small businesses transferring to small businesses, 100 percent of the difference between the bidding credit received by the former and the bidding credit for which the latter is eligible); (2) in year six of the license term the payment will be 80 percent; (3) in year seven the payment will be 60 percent; in year eight the payment will be 40 percent; and in year nine the payment will be 20 percent, after which there will be no required payment. These assessments will have to be paid to the U.S. Treasury as a condition of approval of the assignment, transfer, or ownership change.

⁴¹⁷ 47 C.F.R. § 24.716(d)(1).

⁴¹⁸ 47 C.F.R. § 24.716(d)(2). *See also* 47 C.F.R. § 1.2111.

iv. Other Matters

200. Based upon the record in this proceeding, we have determined that special provisions for rural telcos are not warranted. However, rural telcos can take advantage of the geographic partitioning and spectrum disaggregation provisions which we adopt, and those rural telcos that qualify as small or very small businesses may take advantage of our tiered bidding credits. In addition, we decline to afford an additional bidding credit, as suggested by DigiVox, to small businesses bidding in areas in which they hold no CMRS licenses. We believe that such preferences might discourage small businesses from acquiring WCS spectrum as supplemental for CMRS services already offered in that geographic license area, which would run counter to our goal of flexible use. We also decline to adopt any limit on the total number of WCS licenses for which an entity may take advantage of small business bidding credits. We do not regard such limitation as necessary and generally believe that, absent a strong justification to do otherwise, the auction process should be permitted to work without constraint to allow all bidders to express their valuations of the licenses up for bid. Finally, we also decline to set aside a block of licenses for auction only to designated entities because we do not believe such set-asides to be necessary to ensure opportunities for participation by designated entities in light of the substantial bidding credits, as well as the partitioning and disaggregation rules we are adopting.

201. We also note that our decision both to license WCS in two 10 MHz blocks and two 5 MHz blocks, and to designate MEA and REAG service areas⁴¹⁹ should increase the opportunities for participation in WCS by small businesses and other designated entities. These decisions will help to ensure that the cost of obtaining WCS spectrum remains within reach of a larger number of prospective applicants than would be the case were we to offer only one or two licenses in each area. In addition, by offering licenses for smaller blocks of spectrum, we will enable WCS applicants to acquire only the amount of spectrum necessary to implement their particular service plans. Such efficiencies directly benefit small businesses who may not be able to afford to acquire larger blocks of spectrum. For example, permitting bidders to acquire smaller blocks of spectrum will enable small businesses that have identified niche markets to focus their bidding and avoid paying for more spectrum than they actually need.

IV. PROCEDURAL MATTERS

202. Authority. This action is taken pursuant to Sections 4(i), 7(a), 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections

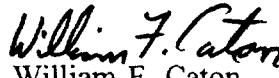
⁴¹⁹ See Sections III.A.2 and 3, *supra*.

154(i), 157(a), 303(c), 303(f), 303(g), and 303(r) and the Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996).

203. Accordingly, IT IS ORDERED that the Commission's Rules are amended to establish Part 27, the Wireless Communications Service (WCS), as set forth in Appendix B, and that, in accordance with the Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996), these Rules shall be effective immediately upon publication in the Federal Register.

204. IT IS FURTHER ORDERED that, pursuant to 47 U.S.C. § 155(c), the Chief of the Wireless Telecommunications Bureau IS GRANTED DELEGATED AUTHORITY to implement and modify auction procedures in the Wireless Communications Service, including the general design and timing of the auction; the manner of submitting bids; the amount of any minimum opening bids and bid increments; activity and stopping rules; and application and payment requirements, including the amount of upfront payments; and to announce such procedures by public notice.

FEDERAL COMMUNICATIONS COMMISSION


William F. Caton
Acting Secretary

APPENDIX A
LIST OF COMMENTS AND REPLY COMMENTS⁴²⁰

Comments

1. ADC Telecommunications, Inc. (ADC)
2. Aerospace and Flight Test Radio Coordinating Council (AFTRCC)
3. AirTouch Communications, Inc. (AirTouch)
4. Alcatel Network Systems, Inc. (ANS)
5. ALLTEL Mobile Communications, Inc. (ALLTEL)
6. American Mobile Radio Corp. (AMRC)
7. American Petroleum Institute (API)
8. American Radio Relay League, Inc. (ARRL)
9. American Water Works Association (AWWA)
10. Association of American Railroads (AAR)
11. Association of Public-Safety Communications Officials-International, Inc. (APCO)
12. AT&T Wireless Services, Inc. (AT&T)
13. Bell Atlantic NYNEX Mobile, Inc. (BANM)
14. Bell Communications Research, Inc. (Bellcore)
15. BellSouth Corp. (BellSouth)
16. Cellular Telecommunications Industry Association (CTIA)
17. Competition Policy Institute (CPI)
18. Consumer Electronics Manufacturers Association (CEMA)
19. Cook Inlet Region, Inc. (CIRI)
20. Digital Satellite Broadcasting Corp. (DSBC)
21. DigiVox Corp. (DigiVox)
22. DSC Communications Corp. (DSC)
23. Florida Cellular RSA, L.P. (Florida Cellular)
24. GTE Service Corp. (GTE)
25. Guam Telephone Authority (GTA)
26. Harris Corp. - Farinon Division (Harris)
27. Industrial Telecommunications Association, Inc. (ITA)
28. Interactive Services Association (ISA)
29. Lucent Technologies, Inc. (Lucent)
30. Markle Foundation (Markle Foundation)
31. Motorola Inc. (Motorola)
32. Multipoint Networks, Inc. (Multipoint Networks)

⁴²⁰ The names of all parties are abbreviated as they refer to themselves in their comments.